	Attorney Docket Number	4630-66461-04
	Application Number	11/206/109
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date	
	First Named Inventor	Chew
	Art Unit	
	Examiner Name	

U.S. PATENT DOCUMENTS

Copies of U.S. Patent documents do not need to be provided, unless requested by the Patent and Trademark Office. For patents, provide the patent number and the issue date. For published U.S. applications, provide the publication number and the publication date. For unpublished pending patent applications, provide the application number and the filing date.

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee

FOREIGN PATENT DOCUMENTS Name of Examiner's Cite No. Country Number **Publication Date** (optional) Initials* Applicant or Patentee WIPO WO 96/13255 A 05/09/1996 Board of Trustees of the **/KA/** (PCT/US95/14502) University of Illinois Japan JP 02049091 A 02/19/1990 Suntory Ltd /KA/ Examiner's Cite No. **OTHER DOCUMENTS** Initials* (optional) CHEW et al., "A Comparison of the Anticancer Activities of Dietary B-Carotene, Canthaxanthin /KA/ and Astaxanthin in Mice in Vivo," Anticancer Research, Vol. 19, No. 3A, May 1999 CRONIN, "The Potential of Astaxanthin: A New Multipurpose, High-Power Antioxidant," /KA/ Alternative & Complementary Therapies, United States, Vol. 8, No. 1, February 2002 GUERIN et al., "Haematococcus astaxanthin: applications for human health and nutrition," /KA/ Trends in Biotechnology, Elsevier Publications, Cambridge, United Kingdom, Vol. 21, No. 5, KURASHIGE et al., "Inhibition of Oxidative Injury of Biological Membranes by Astaxanthin," /KA/ Physiological Chemistry and Physics and Medical NMR, Vol. 22, 1990 /KA/ NISHIGAKI et al., "Suppressive Effect of Astaxanthin on Lipid Peroxidation Induced in Rats." Journal of Clinical Biochemistry and Nutrition, Vol. 16, No. 3, 1994 /KA/ OHGAMI et al., "Effects of Astaxanthin on Lipopolysaccharide-Induced Inflammation in Vitro and in Vivo," IOVS, Vol. 44, No. 6, June 2003 SARRAFIZADEH et al., "New therapies for the treatment of age-related macular degeneration," /KA/ Expert Opinion on Therapeutic Patents, United Kingdom, Vol. 10, No. 3, 2000

EXAMINER SIGNATURE: Kacle Arun	DATE CONSIDERED:	04/26/2007
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^{*} Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

TORMAZION DISCLOSURE STATEMENT

AND APPLICANT

Attorney Docket Number	4630-66461-04
Application Number	10/565,717
Filing Date	January 23, 2006
First Named Inventor	Chew
Art Unit	
Examiner Name	

U.S. PATENT DOCUMENTS

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
/KA/		6,020,351	02/01/2000	Pero
/KA/		6,258,855	07/10/2001	Lorenz et al.
/KA/		6,265,450	07/24/2001	Asami et al.
/KA/		6,277,417	08/21/2001	Anderson
/KA/		6,310,090	10/30/2001	Hayek
/KA/		6,344,214	02/05/2002	Lorenz
/KA/		6,433,025	08/13/2002	Lorenz

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee
/KA/		WIPO	WO 01/24787 A1	04/12/2001	Astacarotene AB
/KA/	<u>. –</u> .	WIPO	WO 01/72296 A1	10/04/2001	Astacarotene AB
Examiner's Initials*	Cite No. (optional)		OT	HER DOCUMENTS	3
/KA/			AKYÖN, "Effect of antioxidants on the immune response of Helicobacter pylori.," Clin. Microbiol. Infect., 8:438-441 (2002).		
/KA/		resistance to ox	BASKIN et al., "Effects of dietary antioxidant supplementation on oxidative damage and resistance to oxidative damage during prolonged exercise in sled dogs," <i>Am. J. Vet. Res.</i> , 51:886-891 (2000).		
/KA/		astaxanthin der	CARDOUNEL et al., "Direct superoxide anion scavenging by a disodium disuccinate staxanthin derivative: relative efficacy of individual stereoisomers versus the statistical nixture of stereoisomers by electron paramagnetic resonance imaging," Biochem.		

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EXAMINER SIGNATURE:	Rade Anoni	DATE CONSIDERED:	04/26/2007

Biophys. Res. Commun., 307:704-712 (2003).

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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First Named Inventor	Chew
Art Unit	
Examiner Name	

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
/KA/		CHEW et al., "A Comparison of the Anticancer Activities of Dietary β-Carotene, Canthaxanthin and Astaxanthin in Mice in Vivo," Anticancer Res., 19:1849-1854 (1999).
/KA/		CHEW et al., "Dietary β -Carotene and Astaxanthin but not Canthaxanthin Stimulate Splenocyte Function in Mice," Anticancer Res., 19:5223-5228 (1999).
/KA/		CHEW et al., "Dietary β-Carotene Stimulates Cell-Mediated and Humoral Immune Response in Dogs," J. Nutri., 130:1910-1913 (2000).
/KA/		CHEW et al., "Astaxanthin Stimulates Immune Response in Humans in a Double-Blind Study," Supply Side West International Trade Show, Venetian Hotel, Las Vegas, Nevada (10/2/2003).
/KA/		CHEW et al., "Carotenoid Action on the Immune Response," J. Nutri., 134:257S-261S (2004).
/KA/		COLLINS et al., "Serum carotenoids and oxidative DNA damage in human lymphocytes," Carcinogenesis, 19:2159-2162 (1998).
/KA/		COLLINS et al. "Biochemical and Biomedical Aspects of Oxidative Modification," Biochem. Soc. Trans., 29:337-341 (2001).
/KA/		GRADELET et al., "Dietary carotenoids inhibit aflatoxin B ₁ -induced liver preneoplastic foci and DNA damage in the rat: Role of the modulation of aflatoxin B ₁ metabolism," Carcinogenesis, 19:403-411 (1998).
/KA/	·	GROSS et al., "Cardioprotection and myocardial salvage by a disodium disuccinate astaxanthin derivative (Cardax TM)," Life Sci., 75:215-224 (2004).
/KA/	·	HALLIWELL, "Why and how should we measure oxidative DNA damage in nutritional studies? How far have we come?," Am. J. Clin. Nutr., 72:1082-1087 (2000).
/KA/	·	JYONOUCHI, "Antitumor Activity of Astaxanthin and Its Mode of Action," Nutr. Cancer, 36:59-65 (2000).
. /KA/		LESLIE, "Astaxanthin Cuts Carpal Tunnel, Arthritis Pain," November 05, 2002, Volume 38, Issue 40.
/KA/		LOFT et al., "Experimental study of oxidative DNA damage," Free Radic. Res., 29:525-539 (1998).
/KA/		LOFT et al., "Antioxidant Intervention Studies Related to DNA Damage, DNA Repair and Gene Expression," Free Rad. Res. 33:S67-83 (2000).
/KA/		LYONS et al., "Modulatory effects of an algal extract containing astaxanthin on UVA-irradiated cells in culture," <i>J. Dermatol. Sci.</i> , 30:73-84 (2002).
/KA/		MAYNE, "Antioxidant Nutrients and Chronic Disease: Use of Biomarkers of Exposure and Oxidative Stress Status in Epidemiologic Research," J. Nutri., 133:933S-940S (2003).

EXAMINER SIGNATURE:	Kach Arain	DATE CONSIDERED:	. 04/26/2007

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Examiner Name			

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
/KA/	. "	MØLLER et al., "Oxidative DNA damage in human white blood cells in dietary antioxidant intervention studies," Am. J. Clin. Nutr., 76:303-310 (2002).
/KA/	,	NAGUIB, "Antioxidant Activities of Astaxanthin and Related Carotenoids," J. Agric. Food Chem., 48:1150-1154 (2000).
/KA/		NAITO et al., "Prevention of diabetic nephropathy by treatment with astaxanthin in diabetic db/db mice," <i>Biofactors</i> , 20:49-59 (2004).
/KA/		O'CONNOR et al., "Modulation of UVA light-induced oxidative stress by β -carotene, lutein and astaxanthin in cultured fibroblasts," J. Dermatol. Sci., 16:226-230 (1998).
/KA/		OHGAMI et al., "Effects of Astaxanthin on Lipopolysaccharide-Induced Inflammation In Vitro and In Vivo," Invest. Ophthalmol. Vis. Sci., 44:2694-2701 (2003).
/KA/		PARK et al., "Dietary Lutein from Marigold Extract Inhibits Mammary Tumor Development in BALB/c Mice," J. Nutri., 128:1650-1656 (1998).
· /KA/		SARETZKI et al., "MitoQ counteracts telomere shortening and elongates lifespan of fibroblasts under mild oxidative stress," Aging Cell, 2:141-143 (2003).
/KA/		SAVOURE et al., "Vitamin A status and metabolism of cutaneous polyamines in the hairless mouse after UV irradiation: action of beta-carotene and astaxanthin," Int. J. Vitam. Nutr. Res., 65:79-86 (1995).
/KA/		SERRA et al., "Extracellular Superoxide Dismutase Is a Major Antioxidant in Human Fibroblasts and Slows Telomere Shortening," J. Biol. Chem., 278:6824-6830 (2003).
/KA/		SPILLER et al., "Safety of an Astaxanthin-Rich Haematococcus pluvialis Algal Extract: A Randomized Clinical Trial," J. Med. Food, 6:51-56 (2003).
/KA/		TORBERGSEN et al., "Recovery of human lymphocytes from oxidative DNA damage; the apparent enhancement of DNA repair by carotenoids is probably simply an antioxidant effect," Eur. J. Nutr., 39:80-85 (2000).
/KA/		VON ZGLINICKI, "Oxidative Stress Shortens Telomeres," <i>Trends Biochem. Sci.</i> , 27:339-344 (2002).
/KA/		WIENER et al., "Astaxanthin from the Microalga Haematococcus - a superb natural antioxidant for human health," <i>Innovations in Food Technology</i> , 5 pages, beginning at page 22 (November 2003).
/KA/		ZSILA et al., "Interaction of the Disodium Disuccinate Derivative of meso-Astaxanthin with Human Serum Albumin: From Chiral Complexation to Self-Assembly," Bioorg. Med. Chem. Lett., 13:4093-4100 (2003).

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EXAMINER SIGNATURE:	kade Ariani	DATE CONSIDERED:	04/26/2007	

^{*} Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

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First Named Inventor	Chew	
Art Unit		
Examiner Name		

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
/KA/		ØSTERLE et al., "Blood appearance and distribution of astaxanthin E/Z isomers among plasma lipoproteins in humans administered a single meal with astaxanthin," presented at 12 th International Symposium on Carotenoids, Cairns, Queensland, Australia, July 18-25, 1999 (Abstract).
/KA/		PARK et al., "Immune Stimulating Action of Dietary Astaxanthin in Humans," FASEB J. 18:A479 (2004) (Abstract).
/KA/		LANDRUM, "Functions of B-Cryptoxanthin, Astaxanthin, Lutein, and Zeaxanthin in Humans," http://www.nutrilite.com/english/IBO/Research/ScientificCredibility/NutritionResearch/doc2159r.asp , printed from internet 7/19/2004, © Nutrilite, 2003 Access Business Group LLC.
/KA/		"Astaxanthin, Nature's Super Carotenoid," <i>BioAstinTM Technical Bulletin #062</i> , pp. 1-19, http://www.cyanotech.com/pdfs/bioastin/batl11.pdf (2000).
/KA/		"Nomenclature and Structure," http://dcb-carot.unibe.ch/nomen.htm (2004).
/KA/		"Comet Assay: the analysis of DNA damage with single cell gel electrophoresis," Department of Biochemistry, The Chinese University of Hong Kong, ENS 4510 Methods in Toxicological Research Laboratory, http://www.bch.cuhk.edu.hk/webct/ens4310/kmc/Comet_Assay.html (2004).
/KA/	*	"Antioxidant Properties of Astaxanthin," http://www.astaxanthin.org/antiox-prop.htm (2004).
/KA/		"Astaxanthin and Health and Wellness in Animals," http://www.astaxanthin.org/wellness.htm (2004).
/KA/		"Carotenoids," http://www.astaxanthin.org/carotenoids.htm (2004).
/KA/		"Haematococcus pluvialis Algal Meal Produced With Mera Pharmaceuticals' Proprietary Technology: A Unique Source of Natural Astaxanthin and Algal Nutrients," http://www.astafactor.com/techreports/tr3004-001.htm (2004).
/KA/		Dr. Weil's Select Formulas Energy Solution, Includes Dr. Weil's Multivitamin & Antioxidant, http://www.drugstore.com/products/prod.asp?pid=84925&catid=52795&trx=PLST-0-SEARCH&trxp1=52795&trxp2=84925&trxp3=1&trxp4=0&btrx=BUY-PLST-0-SEARCH (2004).
/KA/		ZANTHIN® 4 mg Astaxanthin Complex Vegetarian Softgel, Product Specification, Product F0241, U.S. Nutra, 2751 Nutra Lane, Eustis, FL 32726, www.usnutra.com (2004).

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